

**REC'd PCT/PTO 26 JAN 2006**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
DESIGNATED/ELECTED OFFICE (DO/EO/US)**

First Named  
Inventor: Richard Sharp

Serial No.: 10/541,716

International  
Filing Date: January 12, 2004

Title: BACTERIOPHAGE FOR THE  
TREATMENT OF BACTERIAL  
BIOFILMS

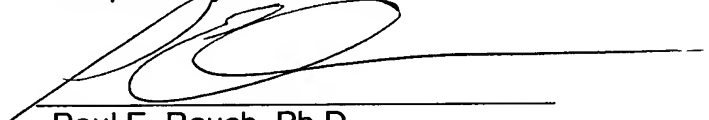
**INFORMATION DISCLOSURE STATEMENT**

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Dear Sir:

In accordance with the provisions of 37 C.F.R. § 1.56, Applicants request that citation and examination of the references identified on the attached Form PTO-1449, required copies of which are enclosed herewith in accordance with 37 C.F.R. §1.98, be made during the course of examination of the above-referenced application for United States Letters Patent.

Respectfully submitted,



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**Case No.** MSQ01-005-US  
**First Named Inventor:** Richard Sharp  
**Serial No.** 10/541,716  
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**For:** BACTERIOPHAGE FOR THE TREATMENT OF BACTERIAL BIOFILMS

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5. Fully Executed Declaration
6. Power of Attorney and Statement under 37 CFR 3.73 (b) and copy of assignment
7. Information Disclosure Statement
8. Form PTO-1449
9. References A5 – A25

Date of Mailing

**Paul E. Rauch, Ph.D., Registration No. 38,591**  
January 23, 2006

Form PTO-1449 (Rev. 8-88)	Attorney Docket No. MSQ01-005-US	Serial No. 10/541,716
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)	Applicant: Richard Sharp	
	International Filing Date: January 12, 2004	Group: To Be Assigned

### U.S. PATENT DOCUMENTS

Examiner Initials*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	2002/0037260	03/202	Budny, et al.			
	A2	4,678,750	07/1987	Vandenbergh, et al.			
	A3	5,582,825	12/1996	Sakaguchi, et al.			
	A4	6,161,036	09/2000	Ghanbari, et al.			

### FOREIGN PATENT DOCUMENTS

Examiner Initials*		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	A5	WO02/07742	01/2002	WO				

### OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS

Include, as applicable: Author, Title, Date, Publisher, Edition or Volume, Pertinent Pages

Examiner Initials*		
	A6	Corbin, Brian D. et al., "Bacteriophage T4 multiplication in a glucose-limited Escherichia coli biofilm", Can. J. Microbiol., vol. 47, pp. 680-684, (2001).
	A7	Doolittle, M. M., et al., "Lytic infection of Escherichia coli biofilms by bacteriophage T4", Can. J. Microbiol., vol. 41, pp. 12-18, (1995).
	A8	Doolittle, M. M., et al., "Tracing the interaction of bacteriophage with bacterial biofilms using fluorescent and chromogenic probes", Journal of Industrial Microbiology, vol. 16, pp. 331-341, (1996).
	A9	Hancock, Robert E. W., et al., "Peptide antibiotics", Antimicrobial Agents and Chemotherapy, vol. 43, No. 6, pp. 1317-1323, (1999).
	A10	Hanlon, Geoffrey W., et al., "Reduction in exopolysaccharide viscosity as an aid to bacteriophage penetration through pseudomonas aeruginosa biofilms", Appl. Environ. Microbiol., vol. 67, no. 6, pp. 2746-2753, (2001).
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	A12	Hughes, Kevin A., et al., "Biofilms susceptibility to bacteriophage attack: the role of phage-borne polysaccharide depolymerase", Microbiology, vol. 144, pp. 3039-3047, (1998).
	A13	Hughes, G., et al., "Biofilms, bacteriophage interactions and bacteriophage therapy", Bioline, pp. 325-331, (2001).
	A14	Mah, Thien-Fah C., et al., "Mechanisms of biofilm resistance to antimicrobial agents", Trends in Microbiology, vol. 9, no. 1, pp. 34-39, (2001).
	A15	Merril, Carl., et al., "The prospect for bacteriophage therapy in Western medicine", Nature Reviews: Drug Discovery, vol. 2, pp. 489-497, (2003).

Examiner	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (Rev. 8-88)	Attorney Docket No. MSQ01-005-US	Serial No. 10/541,716
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)	Applicant: Richard Sharp	
	International Filing Date: January 12, 2004	Group: To Be Assigned

A16	Nickel, J. C., et al., Tobramycin resistance of pseudomonas aeruginosa cells growing as a biofilm on urinary catheter material", Antimicrobial Agents and Chemotherapy, pp. 619-624, (1985).
A17	Roy, B., et al., "Biological inactivation of adhering listeria monocytogenes by listeriaphages and a quaternary ammonium compound", Appl. Environ. Microbiol., vol. 59, no. 9, pp. 2914-2917, (1993).
A18	Soothill, J. S., Bacteriophage prevents destruction of skin grafts by pseudomonas aeruginosa", Burns, vol. 20, no. 3, pp. 209-211, (1994).
A19	Stewart, Philip S., et al., "Antibiotic resistance of bacteria in biofilms", The Lancet, vol. 358, pp. 135-138, (2001).
A20	Sutherland, Ian W., et al., "Polysaccharides in biofilms and their interactions with phage and antimicrobials", Bioline, pp 179-187, (1999).
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A23	Wood, Helen I., et al., "Susceptibility of staphylococcus epidermis biofilm in CSF shunts to bacteriophage attack", Eur. J. Pediatr. Surg., vol. 11, Suppl. 1, S56-57, (2001).
A24	UK Search Report for GB 0300897.2 dated June 30, 2003.
A25	International Search Report for PCT/GB2004/000073 dated June 23, 2004.

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